

Serial No. 10/830,185

Art Unit: 1711

Amendments to the Claims

We claim:

1. (Original) A surface-coated Al/Zn steel sheet comprising a surface coating having as its principal constituent a urethane resin comprising acid amide groups, said resin having a ratio of urethane bonds to acid amide bonds in the range from 9:1 to 1:9.
2. (Original) The surface-coated Al/Zn steel sheet of claim 1, wherein the coating further comprises a chromium compound.
3. (Original) The surface-coated Al/Zn steel sheet of claim 2, wherein the resin/Cr weight ratio, of dry weight of the resin comprising acid amide bonds to weight of the chromium compound, calculated as metallic chromium, is in a range from 1 to 200.
4. (Original) The surface-coated Al/Zn steel sheet of claim 2, wherein the chromium compound is present in the coating in a range from 1 to 100 mg/m², calculated as metallic chromium.
5. (Original) The surface-coated Al/Zn steel sheet of claim 1 with outstanding alkali resistance, cold-rollability, and corrosion resistance, comprising:
a chromium-free surface coating and having on at least one surface a coating which comprises:
 - A) a urethane resin with acid amide groups, with a ratio of urethane bonds to acid amide bonds in the range from 9:1 to 1:9.
 - B) one or more metal compounds selected from the group consisting of Al, Mg, Ca, Zn, Ni, Co, Fe, Zr, Ti, V, W, Mn, and Ce compounds, and

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- C) a silicon compound;
wherein said coating weight is from 0.2 to 5.0 g/m².
6. (Original) The surface-coated Al/Zn steel sheet of claim 5, wherein component B comprises a Zr compound, and component C comprises one or more silicon compounds selected from the group consisting of silica, silicic salts, colloidal silicon dioxide, and silane coupling reagents.
7. (Original) The surface-coated Al/Zn steel sheet of claim 6, wherein component C comprises one or more silane coupling reagents.
8. (Original) The surface-coated Al/Zn steel sheet of claim 7, wherein component B comprises one or more Zr compounds and the mass ratio of component A solids to Zr in the Zr compounds of component B is in a range from 1 to 300.
9. (Original) The surface-coated Al/Zn steel sheet of claim 8, wherein the weight ratio of component A solids to Si in the silane coupling reagent is in a range from 10 to 800.
10. (Original) A chromium-free surface-treatment composition for metal sheets, which comprises:
- A) a urethane resin with introduced acid amide groups, with a ratio of urethane bonds to acid amide bonds in the range from 9:1 to 1:9,
 - B) one or more metal compounds selected from the group consisting of Al, Mg, Ca, Zn, Ni, Co, Fe, Zr, Ti, V, W, Mn, and Ce compounds, and
 - C) a silicon compound;
- said surface-treatment composition being chromium-free.
11. (Original) The chromium-free surface-treatment composition for metal sheets of

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claim 10, wherein component B comprises a Zr compound, and component C comprises one or more silicon compounds selected from the group consisting of silica, silicic salts, colloidal silicon dioxide, and silane coupling reagents.

12. (Original) The chromium-free surface-treatment composition for metal sheets of claim 11, wherein component C comprises one or more silane coupling reagents.
13. (Original) The chromium-free surface-treatment composition for metal sheets of claim 12, wherein component B comprises one or more Zr compounds and the mass ratio of component A solids to Zr in the Zr compounds of component B is in a range from 1 to 300.
14. (Original) The chromium-free surface-treatment composition for metal sheets of claim 13, wherein the weight ratio of component A solids to Si in the silane coupling reagent is in a range from 10 to 800.
15. (Original) The surface-coated Al/Zn steel sheet of claim 5, wherein component B comprises one or more Zr compounds and the mass ratio of component A solids to Zr in the Zr compounds of component B is in a range from 1 to 300.
16. (Original) The chromium-free surface-treatment composition for metal sheets of claim 10, wherein component B comprises one or more Zr compounds and the mass ratio of component A solids to Zr in the Zr compounds of component B is in a range from 1 to 300.
17. (Original) A chromium-free surface-treatment composition for metal sheets, which comprises:
 - A) an acrylic resin with introduced acid amide groups,

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- B) a Zr compound, and
 - C) one or more silicon compounds selected from the group consisting of silica, silicic salts, colloidal silicon dioxide, and silane coupling reagents said surface-treatment composition being chromium-free.
18. (Original) The chromium-free surface-treatment composition for metal sheets of claim 17, wherein component C comprises one or more silane coupling reagents.
19. (Original) The chromium-free surface-treatment composition for metal sheets of claim 18, wherein the mass ratio of component A solids to Zr in the Zr compounds of component B is in a range from 1 to 300 and the weight ratio of component A solids to Si in the silane coupling reagent is in a range from 10 to 800.